Fig. 1

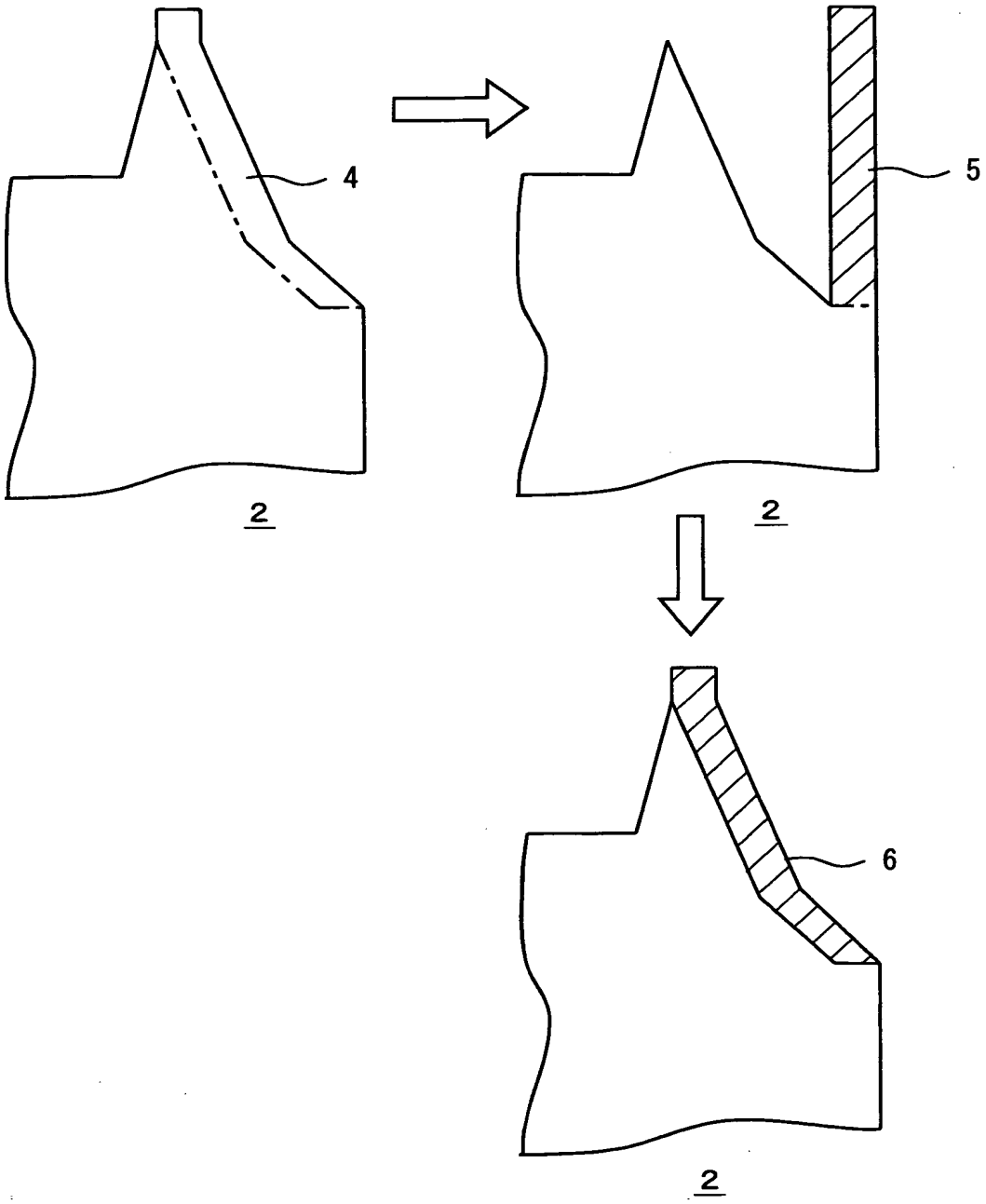


Fig. 2

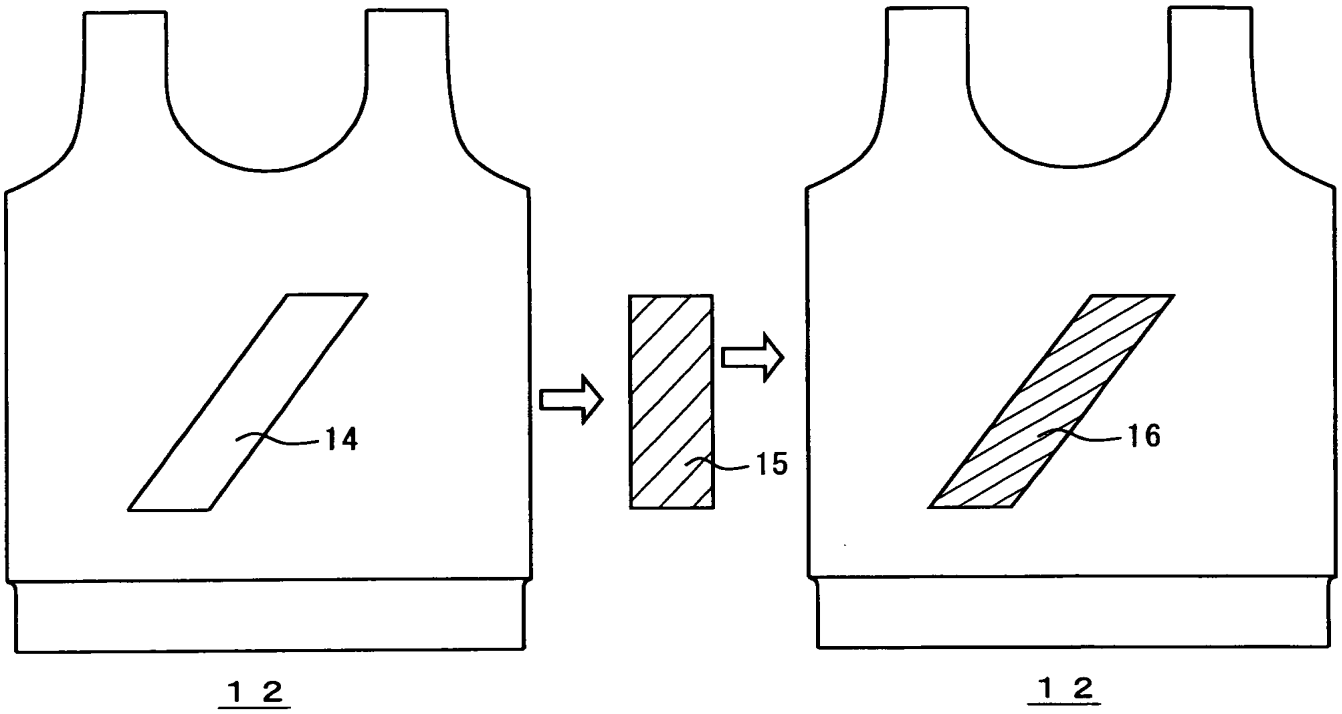
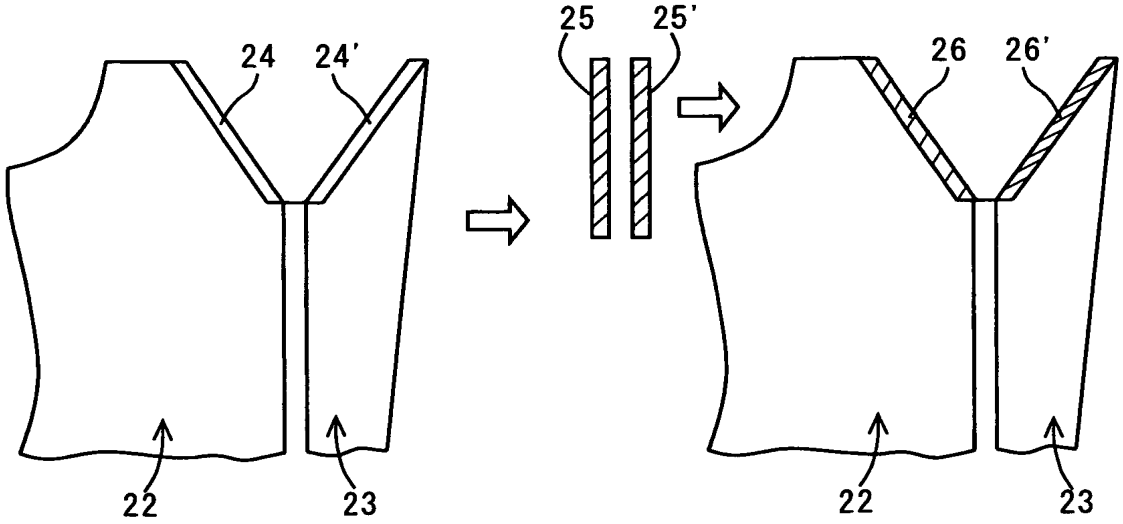
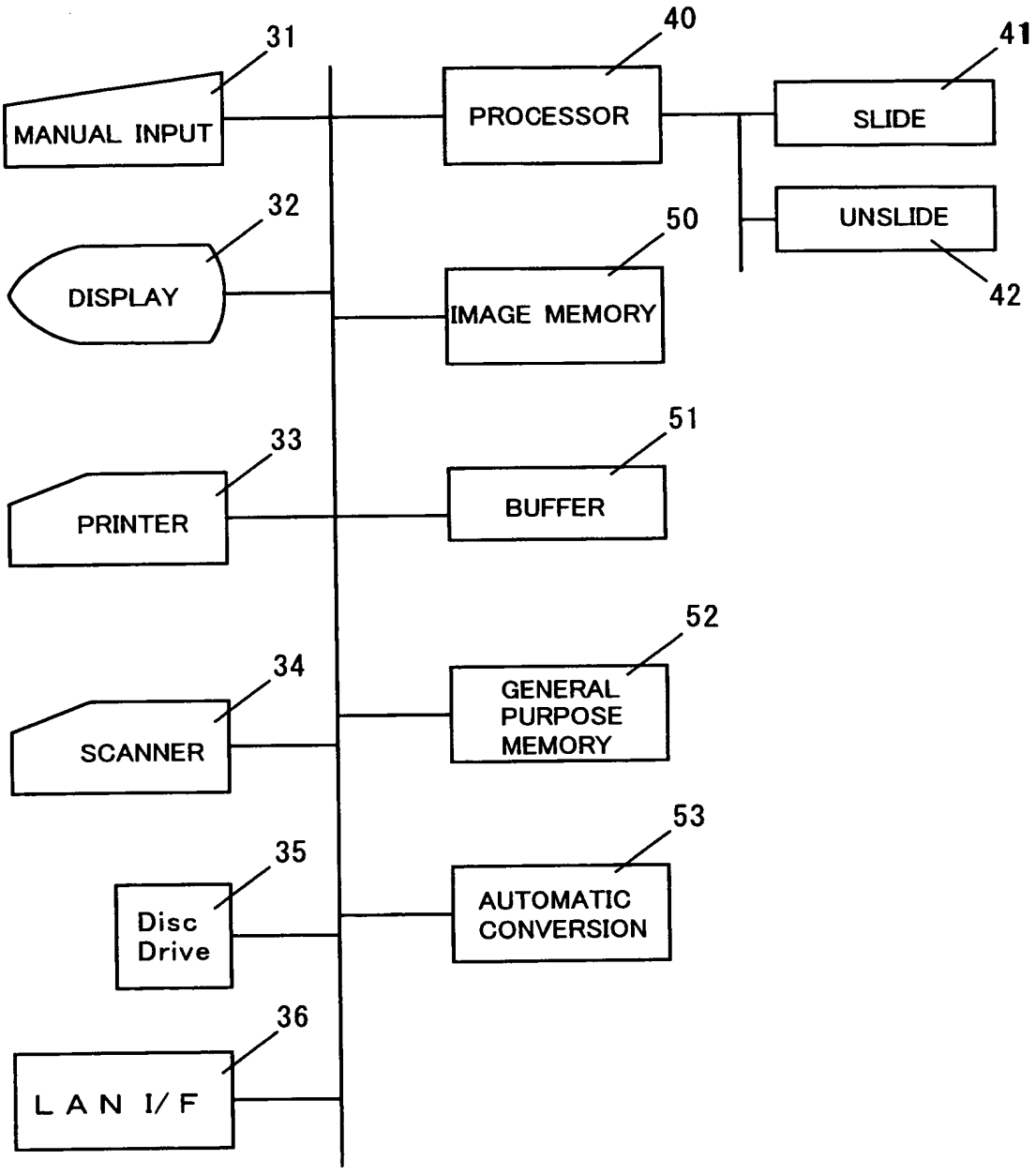


Fig. 3



F i g. 4


31
MANUAL INPUT
32
DISPLAY
33
PRINTER
34
SCANNER
35
Disc Drive
36
L A N I/ F
40
PROCESSOR
41
SLIDE
UNSLIDE
42
50
IMAGE MEMORY
51
BUFFER
52
GENERAL PURPOSE MEMORY
53
AUTOMATIC CONVERSION

30

Fig. 5

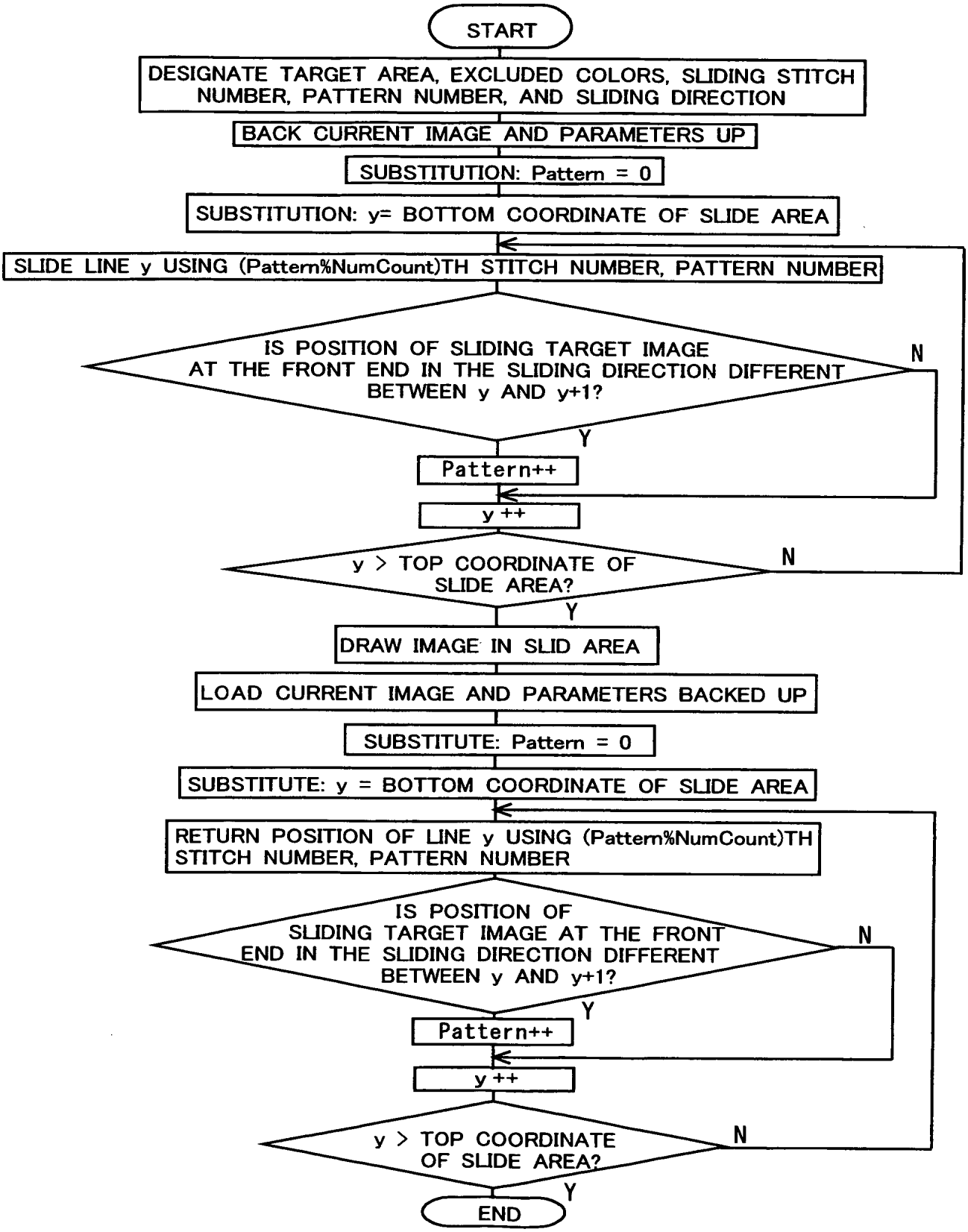

START
DESIGNATE TARGET AREA, EXCLUDED COLORS, SLIDING STITCH NUMBER, PATTERN NUMBER, AND SLIDING DIRECTION
BACK CURRENT IMAGE AND PARAMETERS UP
SUBSTITUTION: Pattern = 0
SUBSTITUTION: y= BOTTOM COORDINATE OF SLIDE AREA
SLIDE LINE y USING (Pattern%NumCount)TH STITCH NUMBER, PATTERN NUMBER
IS POSITION OF SLIDING TARGET IMAGE AT THE FRONT END IN THE SLIDING DIRECTION DIFFERENT BETWEEN y AND y+1?
N
Y
Pattern++
y ++
y > TOP COORDINATE OF SLIDE AREA?
N
Y
DRAW IMAGE IN SLID AREA
LOAD CURRENT IMAGE AND PARAMETERS BACKED UP
SUBSTITUTE: Pattern = 0
SUBSTITUTE: y = BOTTOM COORDINATE OF SLIDE AREA
RETURN POSITION OF LINE y USING (Pattern%NumCount)TH STITCH NUMBER, PATTERN NUMBER
IS POSITION OF SLIDING TARGET IMAGE AT THE FRONT END IN THE SLIDING DIRECTION DIFFERENT BETWEEN y AND y+1?
N
Y
Pattern++
y ++
y > TOP COORDINATE OF SLIDE AREA?
N
Y
END

Fig. 6

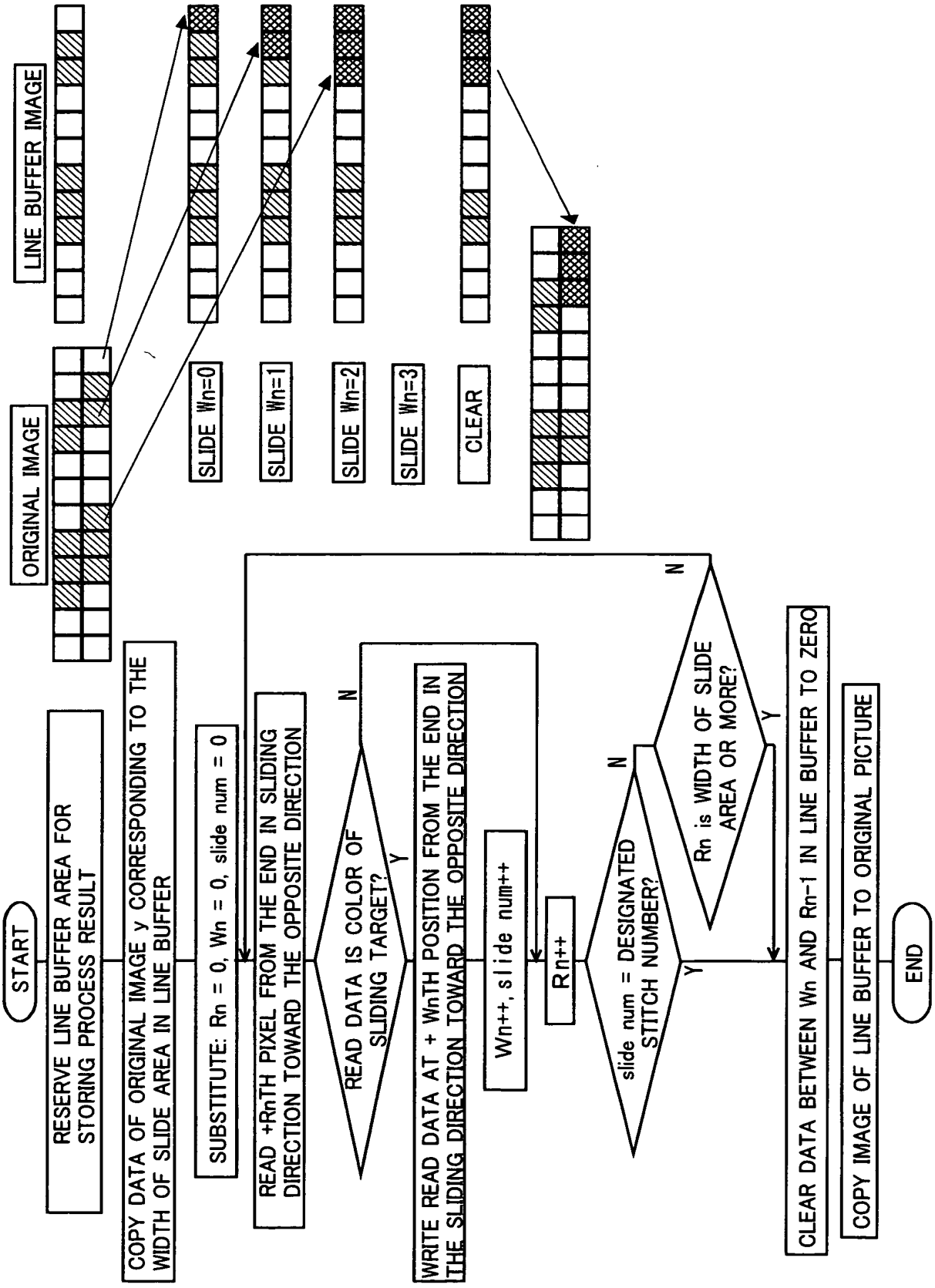

START
RESERVE LINE BUFFER AREA FOR STORING PROCESS RESULT
COPY DATA OF ORIGINAL IMAGE y CORRESPONDING TO THE WIDTH OF SLIDE AREA IN LINE BUFFER
SUBSTITUTE: Rn = 0, Wn = 0, slide num = 0
READ +RnTH PIXEL FROM THE END IN SLIDING DIRECTION TOWARD THE OPPOSITE DIRECTION
READ DATA IS COLOR OF SLIDING TARGET?
N
Y
WRITE READ DATA AT + WnTH POSITION FROM THE END IN THE SLIDING DIRECTION TOWARD THE OPPOSITE DIRECTION
Wn++, slide num++
Rn++
slide num = DESIGNATED STITCH NUMBER?
N
Y
Rn is WIDTH OF SLIDE AREA OR MORE?
N
Y
CLEAR DATA BETWEEN Wn AND Rn-1 IN LINE BUFFER TO ZERO
COPY IMAGE OF LINE BUFFER TO ORIGINAL PICTURE
END
ORIGINAL IMAGE
LINE BUFFER IMAGE
SLIDE Wn=0
SLIDE Wn=1
SLIDE Wn=2
SLIDE Wn=3
CLEAR

Fig. 7

START
RESERVE LINE BUFFER AREA CORRESPONDING TO AREA WIDTH FOR STORING PROCESS RESULT
CLEAR LINE BUFFER
SEARCH AND REGISTER ON LIST: TOTAL NUMBER OF SLIDING TARGET BLOCKS IN y COURSE; AND DISTANCE FROM EDGE IN SLIDING DIRECTION AND SIZE OF EACH BLOCK BASED ON BACKED UP PARAMETERS AND IMAGE. AT THIS TIME, IF SLIDE DESIGNATION COLOR IS PRESENT FOR DESIGNATED SLIDING STITCH NUMBER, THE PROCESS IS FINISHED.
OBTAIN EDGE COORDINATE X IN DIRECTION FOR RETURNING TO IMAGE BEFORE SLIDING
SUBSTITUTE: Rn = N-1
OBTAIN INFORMATION OF Rn BLOCK IN LIST
COPY IMAGE HAVING SIZE OF OBTAINED BLOCK FROM x OF SLIDE IMAGE TO POSITION CORRESPONDING TO BACKED UP IMAGE IN LINE BUFFER
x = x + OBTAINED BLOCK SIZE
Rn--
Rn < 0?
N
Y
CLEAR GAP TO 0
END
BACKED UP IMAGE
CURRENT IMAGE
BLOCK 1
OFFSET 6
SIZE 1
BLOCK 0
OFFSET 1
SIZE 2
Rn=N-1
Rn=N-2
GAP CLEAR
FINISH PROCESS FOR DESIGNATED COURSE, COPY TO CURRENT IMAGE
BLOCK LIST
DISTANCE FROM EDGE IN SLIDING
DIRECTION OF ORIGINAL IMAGE
OFFSET
SIZE